1. (12 points) Write the correct IUPAC name for each of the following:
   a. \[
   \text{NH}_2
   \]
   b. \[
   \text{H}
   \]
   c. \[
   \text{C}_6\text{H}_5
   \]
   d. \[
   \text{O} \quad \text{O}
   \]

2. (12 points) Draw the structure corresponding to the name given. Please show all stereochemistry clearly.
   a. \[(3R,6R)-(4E)-6\text{-methyl-4-oc}-
   \]
   b. \[
   \text{dimethylheptane}
   \]
   c. \[
   \text{1,1-dimethylpropyl butanoate}
   \]
   d. \[
   \text{(3R)-3-methylcyclopentanone}
   \]

3. (6 points) For each pair, indicate whether they are diastereomers, enantiomers or the same.
   a. \[
   \text{Br}
   \]
   b. \[
   \text{OH}
   \]
   c. \[
   \text{OH}
   \]
   d. \[
   \text{OH}
   \]